

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A waveguide ~~(9, 18, 35, 38)~~ for use in illuminating a display panel ~~(2)~~, comprising:
a first face ~~(13)~~ arranged to receive light from a light source ~~(3)~~; and
an exit face ~~(15)~~ through which light may exit the waveguide; configured so that, in use, light enters the waveguide ~~(9, 18, 35, 38)~~ through said first face, is scattered by a plurality of portions of diffusing material ~~(10a to 10f, 19a to 19g)~~ located within the waveguide ~~(9, 18, 35, 38)~~ and leaves the waveguide ~~(9, 18, 35, 38)~~ through said exit face ~~(15)~~; thereby illuminating the display panel;
wherein at least one of said plurality of portions can be

switched between a state in which said portion is predominantly light-transmissive and a state in which said part is predominantly diffusive.

2. (Currently Amended) A The waveguide ~~(9, 18, 35, 38)~~ according to claim 1, wherein the light leaving the waveguide ~~(9, 18, 35, 38)~~ through the exit face forms a pattern of light lines.

Claim 3 (Canceled)

4. (Currently Amended) A The waveguide ~~(18, 35, 38)~~ according to claim 3 claim 1, further comprising a plurality of electrodes ~~(22, 23, 24, 24a, 39)~~, wherein said at least one portion ~~(19a to 19g)~~ is configured to respond to the application of an electric field through said electrodes ~~(22, 23, 24, 24a, 39)~~ by switching from one of said light-transmissive state and said diffusive state to the other of said light-transmissive state and said diffusive state.

5. (Currently Amended) A—The waveguide according to claim 4,
wherein light passing through a first region of the exit face (15)
produces uniform illumination within a first area (26), while light
passing through a second region of the exit face (15)—produces a
pattern of light lines within a second area (27).

6. (Currently Amended) A—The waveguide according to claim 5,
wherein said plurality of electrodes comprises a set of column
electrodes (22, 23).

7. (Currently Amended) A—The waveguide according to claim 6,
wherein said plurality of electrodes further comprises a set of row
electrodes (24).

8. (Currently Amended) A—The waveguide according to claim 5,
wherein said plurality of electrodes comprises a two dimensional
array of electrodes (22a to 22c, 22p, 22q, 23a to 23d, 23p to 23s).

9. (Currently Amended) A—The waveguide according to claim 8,

further comprising an active matrix—(32, 33, 34).

10. (Currently Amended) A—The waveguide (35)—according to claim 1, comprising a reflective surface—(36), wherein said reflective surface (36) is arranged to reflect light scattered by at least one portion (10a to 10f, 19a to 19g) in a direction leading away from the exit face—(15).

11. (Currently Amended) A waveguide (9, 18, 35, 38) according to claim 1, for use in illuminating a display panel, comprising:
a first face arranged to receive light from a light source;
and

an exit face through which light may exit the waveguide;
configured so that, in use, light enters the waveguide through
said first face, is scattered by a plurality of portions of
diffusing material located within the waveguide and leaves the
waveguide through said exit face; thereby illuminating the display
panel;

wherein the diffusing material comprises a liquid crystal.

12. (Currently Amended) A The waveguide {18, 35, 38}—according to claim 11, wherein the diffusing material is a liquid crystal gel.

13. (Currently Amended) A The display {8, 17, 37}—comprising:
a display panel—{2}; and
an illumination system arranged to illuminate the display panel—{2}, comprising a light source {3} and a waveguide {9, 18, 35, 38}—according to claim 1.

14. (Currently Amended) A display {8, 17, 37}—comprising:
a display panel—{2}; and
an illumination system arranged to illuminate the display panel—{2}, comprising a light source {3} and a waveguide {9, 18, 35, 38}—for illuminating the display panel;
wherein the waveguide comprises:
a first face {13}—arranged to receive light from a light source—{3}; and

an exit face ~~(15)~~ through which light may exit the waveguide; configured so that, in use, light enters the waveguide ~~(9, 18, 35, 38)~~ through said first face, is scattered by a plurality of portions of diffusing material ~~(10a to 10f, 19a to 19g)~~ located within the waveguide ~~(9, 18, 35, 38)~~ and leaves the waveguide ~~(9, 18, 35, 38)~~ through said exit face ~~(15)~~;

and wherein at least one of said portions ~~(19a to 19g)~~ can be switched between a state in which said part is predominantly light-transmissive and a state in which said part is predominantly diffusive so that light leaving the exit face ~~(15)~~ forms a pattern of light lines, comprising:

an arrangement ~~(40, 41)~~ for determining the position of a viewer ~~(6)~~;

means ~~(25, 40)~~ for switching one or more of the portions ~~(19)~~ in order to vary the position of the light lines according to the detected position of the viewer ~~(6)~~; and

means ~~(35, 37)~~ for adjusting an image displayed on the display panel ~~(2)~~ according to the detected position of the viewer.

15. (Currently Amended) A communications device comprising a display ~~(8, 17, 37)~~ according to claim 13.

16. (Currently Amended) A computing device ~~(28)~~ comprising a display ~~(8, 17, 37)~~ according to claim 13.

17. (Currently Amended) Audio/visual An audio/visual equipment comprising a display ~~(8, 17, 37)~~ according to claim 13.

18. (Currently Amended) A method of presenting an image comprising the acts of:

displaying an image on a display panel ~~(2)~~; and
illuminating the display panel ~~(2)~~ using a light source ~~(3)~~
and a waveguide ~~(18, 35, 38)~~;

wherein said waveguide ~~(18, 35, 38)~~ comprises a layer ~~(19)~~ of
diffusive material and the step act of illuminating backlighting
comprises the act of setting the optical properties of at least one
portion ~~(19a to 19g)~~ of the layer ~~(19)~~ of diffusive material; and
wherein the act of setting optical properties comprises

applying a potential difference across said at least one portion.

Claim 19 (Canceled)

20. (Currently Amended) A—The method according to claim 19
claim 18, wherein the step of setting optical properties comprises
switching at least one portion (19a to 19g) of the layer (19) of
diffusive material between a state in which said portion (19a to
19g)—is predominantly light-transmissive and a state in which said
portion (19a to 19g)—is predominantly diffusive.

21. (Currently Amended) A—The method according to claim 18,
wherein the optical properties of said portions (19a to 19g) are
set so that said illuminating comprises a plurality of light lines
and said image is a 3D image (31).

22. (Currently Amended) A—The method according to claim 18,
wherein the optical properties of said portions (19a to 19g) are
set so that uniform illumination is produced and said image is a 2D

image-(30).

23. (Currently Amended) A-The method according to claim 18, comprising switching said ~~regions (19a to 19g)~~ at least one portion between a first mode, in which a plurality of light lines is produced for illuminating a 3D image-(31), and a second mode in which uniform illumination is produced for illuminating a 2D image -(30).

24. (Currently Amended) A-The method according to claim 21, wherein said illuminating illuminates a first area of the display panel -(2)-with uniform illumination and a second area of the display panel -(2)-with the plurality of light lines, the image being displayed on the display panel -(2)-comprising a 2D image -(30) within said first area and a 3D image -(31)-within said second area.

25. (Currently Amended) A method of presenting an image comprising:

displaying an image on a display panel-(2); and

providing backlighting for the display panel (2)—using a light source (3) and a waveguide (18, 35, 38);

wherein said waveguide (18, 35, 38) comprises a layer (19) of diffusive material and the step of providing backlighting comprises setting the optical properties of at least one portion (19a to 19g) of the layer (19) of diffusive material; and wherein the optical properties of said portions (19a to 19g) at least one portion are set so that said backlighting comprises a plurality of light lines and said image is a 3D image (31); and,

determining a position of a viewer (6) and adjusting said pattern of light lines and said image (31) according to the determined viewer position.